

CLAIM AMENDMENTS

1. (Canceled)

2. (Currently Amended) A method for decreasing cyclin-dependent kinase activity in a plant, the method comprising:

(a) introducing into a plant cell a nucleic acid molecule encoding a plant cyclin-dependent kinase inhibitor (CKI) which binds a plant cyclin-dependent kinase having a PSTAIRE cyclin-binding motif, wherein the nucleic acid molecule encoding the plant CKI is under the control of a promoter which functions in a plant cell, and wherein the CKI comprises an amino acid sequence ~~of at least one~~ as set forth in SEQ ID NO:34[[,]] or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:35 [[,]] or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:36 or an amino acid sequence that is at least 70% identical thereto ~~or any of the aforementioned amino acid sequences having one mismatch at any position;~~ and

(b) regenerating a plant from the plant cell, wherein the regenerated plant has decreased cyclin dependent kinase activity relative to a corresponding wild type plant.

3. (Canceled)

4. (Canceled)

5. (Currently Amended) A method for increasing in a plant cell, the level of cyclin-dependent kinase inhibitor (CKI) which binds a plant cyclin-dependent kinase, the method comprising:

(a) introducing into a plant cell a nucleic acid molecule encoding a plant (CKI) which binds a plant cyclin-dependent kinase having a PSTAIRE cyclin-binding motif, wherein the nucleic acid molecule encoding the plant CKI is under the control of a promoter which functions in a plant cell, and wherein the CKI comprises an amino acid sequence ~~of at least one of as set forth in SEQ ID NO:34[[,]]~~ or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:35 or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:36 or an amino acid sequence that is at least 70% identical thereto ~~or any of the aforementioned amino acid sequences having one mismatch at any position;~~ and

(b) expressing the nucleic acid molecule in the plant cell, thereby increasing the level of CKI in the plant cell relative to a corresponding cell of a wild type plant.

6. (Canceled)

7. (Currently Amended) A method for increasing plant cell size, the method comprising:

(a) introducing into a plant cell a nucleic acid molecule encoding a plant cyclin-dependent kinase inhibitor (CKI) which binds a plant cyclin-dependent kinase having a PSTAIRE cyclin-binding motif, wherein the nucleic acid molecule encoding the plant CKI is under the control of a promoter which functions in a plant cell, and wherein the CKI comprises an amino acid sequence ~~of at least one of as set forth in SEQ ID NO:34[[,]]~~ or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:35 or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:36 or an amino acid sequence that is at least 70% identical thereto ~~or any of the aforementioned amino acid sequences having one mismatch at any position;~~ and

(b) expressing the nucleic acid molecule in the plant cell, thereby increasing plant cell size relative to a corresponding wild type plant.

8. (Previously Presented) The method of claim 7 wherein the plant cell is a floral petal cell.

9. (Previously Presented) The method of claim 7 wherein the plant cell is a leaf cell.

10. (Previously Presented) The method of claim 7 wherein the plant cell is a stem cell.

11. (Currently Amended) A method for decreasing cell number in a plant, the method comprising:

(a) introducing into a plant cell a nucleic acid molecule encoding a cyclin-dependent kinase inhibitor (CKI) which binds a plant cyclin-dependent kinase having a PSTAIRE cyclin-binding motif, wherein the nucleic acid molecule encoding the plant CKI is under the control of a promoter which functions in a plant cell and wherein the CKI comprises an amino acid sequence ~~of at least one of~~ as set forth in SEQ ID NO:34[[,]] or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:35 or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:36 or an amino acid sequence that is at least 70% identical thereto ~~or any of the aforementioned amino acid sequences having one mismatch at any position;~~ and

(b) regenerating a plant from the plant cell, wherein the regenerated plant has decreased cell number relative to a corresponding wild type plant.

12. (Canceled)

13. (Canceled)

14. (Currently Amended) A method of increasing leaf serration in a plant the method comprising:

(a) introducing into a plant cell a nucleic acid molecule encoding a plant cyclin-dependent kinase inhibitor (CKI) which binds a plant cyclin-dependent kinase having a PSTAIRE cyclin-binding motif, wherein the nucleic acid molecule encoding the plant CKI is under the control of a promoter which functions in a plant cell and wherein the CKI comprises an amino acid sequence ~~of at least one of~~ as set forth in SEQ ID NO:34[,] or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:35 or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:36 or an amino acid sequence that is at least 70% identical thereto ~~or any of the aforementioned amino acid sequences having one mismatch at any position;~~ and

(b) regenerating a plant from the plant cell, wherein the regenerated plant has increased leaf serration relative to a corresponding wild-type plant.

15. (Canceled)

16. (Canceled)

17. (Currently Amended) A method of increasing stomata size in a plant, the method comprising:

(a) introducing into a plant cell a nucleic acid molecule encoding a plant cyclin-dependent kinase inhibitor (CKI) which binds a plant cyclin-dependent kinase having a PSTAIRE cyclin-binding motif, wherein the nucleic acid molecule encoding the plant CKI is under the control of a promoter which functions in a plant cell and wherein the CKI comprises an amino acid sequence ~~of at least one of~~ as set forth in

SEQ ID NO:34[[,]] or an amino acid sequence that is at least 70% identical thereto,
and an amino acid sequence as set forth in SEQ ID NO:35 or an amino acid sequence
that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ
ID NO:36 or an amino acid sequence that is at least 70% identical thereto ~~or any of~~
~~the aforementioned amino acid sequences having one mismatch at any position; and~~

(b) regenerating a plant from the plant cell, wherein the regenerated plant has increased stomata size relative to a corresponding wild type plant.

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Currently Amended) A method of reducing petal size in a plant, said method comprising:

(a) introducing into a plant cell a nucleic acid molecule encoding a plant cyclin-dependent kinase inhibitor (CKI) which binds a plant cyclin dependent kinase having a PSTAIRE cyclin-binding motif, wherein the nucleic acid molecule encoding the plant CKI is under the control of a promoter which functions in a plant cell and wherein the CKI comprises an amino acid sequence ~~of at least one of~~ as set forth in SEQ ID NO:34[[,]] or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:35 or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:36 or an amino acid sequence that is at least 70% identical thereto ~~or any of the aforementioned amino acid sequences having one mismatch at any position;~~
and

(b) regenerating a plant from the plant cell, wherein the regenerated plant has flowers with reduced petal size relative to a corresponding wild type plant.

22. (Canceled)

23. (Canceled)

24. (Previously Presented) The method of claim 21 wherein the promoter which functions in a plant cell is a petal-specific promoter.

25. (Currently Amended) A method of reducing leaf venation in a plant, said method comprising: (a) introducing into a plant cell a nucleic acid molecule encoding a plant cyclin-dependent kinase inhibitor (CKI) which binds a plant cyclin-dependent kinase having a PSTAIRE cyclin-binding motif, wherein the nucleic acid molecule encoding the plant CKI is under the control of a promoter which functions in a plant cell and wherein the CKI comprises an amino acid sequence ~~of at least one of~~ as set forth in SEQ ID NO:34[[],] or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:35 [[],] or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:36 or an amino acid sequence that is at least 70% identical thereto ~~or any of the aforementioned amino acid sequences having one mismatch at any position; and~~

(b) regenerating a plant from the plant cell, wherein the regenerated plant has leaves with reduced leaf venation relative to a corresponding wild type plant.

26. (Canceled)

27. (Currently Amended) A method of decreasing endoreduplication and ploidy level in a plant cell, the method comprising:

(a) introducing into a plant cell a nucleic acid molecule encoding a plant

cyclin-dependent kinase inhibitor (CKI) which binds a plant cyclin-dependent kinase having a PSTAIRE cyclin-binding motif, wherein the nucleic acid molecule encoding the plant CKI is under the control of a promoter which functions in a plant cell and wherein the CKI comprises an amino acid sequence ~~of at least one of~~ as set forth in SEQ ID NO:34[[,]] or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:35 [[,]] or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:36 or an amino acid sequence that is at least 70% identical thereto ~~or any of the aforementioned amino acid sequences having one mismatch at any position;~~ and

(b) expressing the nucleic acid molecule in the plant cell, thereby decreasing endoreduplication and ploidy level in the plant cell relative to a corresponding cell from a wild type plant.

28. (Canceled)

29. (Canceled)

30. (Currently Amended) A method of reducing plant seed size, the method comprising:

(a) introducing into a plant cell a nucleic acid molecule encoding a plant cyclin-dependent kinase inhibitor (CKI) which binds a plant cyclin-dependent kinase having a PSTAIRE cyclin-binding motif, wherein the nucleic acid molecule encoding the plant CKI is under the control of a promoter which functions in a plant cell and wherein the CKI comprises an amino acid sequence ~~of at least one of~~ as set forth in SEQ ID NO:34[[,]] or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:35 [[,]] or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:36 or an amino acid sequence that is at least 70%

identical thereto ~~or any of the aforementioned amino acid sequences having one mismatch at any position; and~~

(b) regenerating a plant from the plant cell, wherein the regenerated plant has decreased seed size relative to a corresponding wild type plant.

31. (Canceled)

32. (Canceled)

33. (Canceled)

34. (Canceled)

35. (Canceled)

36. (Currently Amended) A transgenic plant, a variety obtained therefrom, a plant part, or plant cell which comprises a nucleic acid molecule encoding a plant cyclin-dependent kinase inhibitor (CKI) which binds a plant cyclin-dependent kinase having a PSTAIRE cyclin-binding motif, wherein the nucleic acid molecule encoding the plant CKI is under the control of a promoter which functions in a plant cell and wherein the CKI comprises an amino acid sequence ~~of at least one of~~ as set forth in SEQ ID NO:34[[,]] or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:35 or an amino acid sequence that is at least 70% identical thereto, and an amino acid sequence as set forth in SEQ ID NO:36 or an amino acid sequence that is at least 70% identical thereto ~~or any of the aforementioned amino acid sequences having one mismatch at any position; and~~

wherein the nucleic acid molecule encoding a plant CKI is heterologous to the genome of the transgenic plant, or is homologous but additional to the genome of the transgenic plant or has been introduced into the transgenic plant, plant part or plant cell by recombinant DNA means.

37. (Previously Presented) The transgenic plant of claim 36 having decreased cyclin-dependent kinase activity relative to a corresponding wild type plant.

38. (Previously Presented) The transgenic plant of claim 36 having an increased level of CKI relative to a corresponding wild type plant.

39. (Previously Presented) The transgenic plant of claim 36 having altered leaf shape relative to a corresponding wild type plant.

40. (Previously Presented) The transgenic plant of claim 36 having leaves which are more highly serrated compared to a corresponding wild type plant.

41. (Previously Presented) The transgenic plant of claim 36 having leaves which are more deeply lobed than a corresponding wild type plant.

42. (Canceled)

43. (Previously Presented) The transgenic plant of claim 36 having flowers with reduced petal size relative to flowers of a corresponding wild type plant.

44. (Previously Presented) The transgenic plant of claim 36 having reduced leaf venation relative to leaves of a corresponding wild type plant.

45. (Currently Amended) The transgenic plant of claim 36 having cells with decreased endoreduplication and ploidy levels relative to a corresponding wild type plant.

46. (Canceled)

47. (Previously Presented) The transgenic plant of claim 36 having reduced seed size relative to a corresponding wild type plant.

48. (Previously Presented) The transgenic plant of claim 36, wherein the total cell number of the plant is decreased relative to a corresponding wild type plant.

49. (Previously Presented) The transgenic plant of claim 36, wherein at least one of petals, leaves or stems comprise cells of increased size relative to a corresponding wild type plant.

50. (Currently Amended) The transgenic plant of claim 36, comprising leaves with increased stomata size relative to a corresponding wild type plant.

51. (Canceled)

52. (Previously Presented) The method of any one of claims 2, 5, 7-11, 14, 17, 21, 24, 25, 27, or 30, wherein the CKI comprises the amino acid sequence as set forth in any one of SEQ ID NO: 2, SEQ ID NO:4, or SEQ ID NO:6.

53. (Previously Presented) The method of any one of claims 2, 5, 7-11, 14, 17, 21, 24, 25, 27, or 30, wherein the nucleic acid molecule comprises the nucleotide sequence as set forth in any one of SEQ ID NO:1, SEQ ID NO:3, or SEQ ID NO:5.

54. (Currently Amended) The method of any one of claims 2, 5, 7-11, 14, 17, 21, 24, 25, 27, or 30 wherein the CKI further comprises the consensus amino acid sequence as set forth in ~~any one of~~ SEQ ID NO:37[[,]] or a sequence that is 70% identical thereto, or wherein the CKI further comprises the consensus amino acid sequence as set forth in SEQ ID NO:37 or a sequence that is 70% identical thereto and a sequence as set forth in SEQ ID NO:38 or a sequence that is 70% identical thereto and a sequence as set forth in [[or]] SEQ ID NO:39 or a sequence that is 70% identical thereto ~~any of the aforementioned amino acid sequences having one mismatch at any position.~~

55. (Currently Amended) The transgenic plant of claim 36 wherein the CKI further comprises the consensus amino acid sequence as set forth in ~~any one of~~ SEQ ID NO:37[[,]] or a sequence that is 70% identical thereto, or wherein the CKI further comprises the consensus

amino acid sequence as set forth in SEQ ID NO:37 or a sequence that is 70% identical thereto
and a sequence as set forth in SEQ ID NO:38 or a sequence that is 70% identical thereto and a
sequence as set forth in [[or]] SEQ ID NO:39 or a sequence that is 70% identical thereto ~~any of~~
~~the aforementioned amino acid sequences having one mismatch at any position.~~

56. (Previously Presented) Harvestable parts or propagation material from the transgenic plant of claim 36, comprising the nucleic acid molecule that was introduced into the parent plant.

57. (Previously Presented) Cut flowers from the transgenic plant of claim 36, comprising the nucleic acid molecule that was introduced into the parent plant.

58. (Canceled)

59. (Canceled)